

Appln. No.: 10/798,979
Amendment Dated July 18, 2007
Reply to Office Action of April 19, 2007

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Remarks/Arguments:

Claim 1-19 are pending and stand rejected.

By this Amendment, claims 1-4, 6-9, 11-12, 14-16 and 18 are amended and claims 13 and 17 are canceled without prejudice. Further, new claims 20 and 21 are added. Support for the claim amendments and new claim can be found throughout the original specification and, for example, in the original specification at paragraphs [22] to [27].

Rejection of Claims 1-19 under 35 U.S.C. §102(b)

In the Office Action, at item 2, claims 1-19 are rejected under 35 U.S.C. §102(b) as being anticipated by Borg et al. (U.S. Patent No. 6,476,864, hereafter referred to as Borg).

Reconsideration is respectfully requested.

Claim 1

Claim 1 is directed to an active pixel sensor array sampling system, and recites:

one or more of the video and reset circuits include

- (1) an amplifier having an input and output;
- (2) and column input having a video voltage thereon; and
- (3) a capacitor such that a first mode the capacitor is coupled between the column input and the input of the amplifier and in the second mode the capacitor is coupled between the input of the amplifier and the output of the amplifier.

Borg Reference

Borg discloses a pixel column amplifier architecture which creates a reduced noise differential image signal from a pixel sensor array. The pixel column amplifier architecture comprises a first double sampling (DS) circuit and a second DS circuit that has the same configuration as the first DS circuit. An image signal containing a combination of noise and image components is coupled to the first DS circuit. A reference image signal, held in a reset state, represents noise component of the image signal and is coupled to the second DS circuit. (See Borg at column 3, lines 11-21.)

Borg further discloses two capacitors C1 and C2 related to column amplifier 230 and two additional capacitors C3 and C4 related to column amplifier 240. The configuration of amplifiers 230 and 240 are identical. It is clear from FIG. 5 and the disclosure in Borg at column 7, line 10-27 that capacitor C1 is configured to be coupled between column input 38 and the amplifier input of amplifier 80. Moreover, it is also clear that from FIG. 5 and the same disclosure in Borg that capacitor C2 is configured to be coupled between the input of amplifier 80 and either the output of amplifier 80 or reference voltage source 88. Neither capacitor C1 nor capacitor C2 is configured such that in the first mode it is coupled between the column input and the input of the amplifier and in a second mode it is coupled between the input of the amplifier and the output of the amplifier. That is, capacitor C1 of Borg cannot be coupled between the input of the amplifier and the output of the amplifier. Moreover, capacitor C2 of Borg cannot be coupled between the column input and the input of the amplifier.

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Accordingly, it is submitted that claim 1 patentably distinguishes over Borg for at least the above-mentioned reasons.

Claims 6, 11 and 15

Claims 6, 11 and 15, which include similar but not identical features to those of claim 1, are submitted to patentably distinguish over Borg for at least similar reasons to those of claim 1.

Claims 2-5, 7-10, 12, 14, 16, 18-19

Claims 2-5, 7-10, 12, 14, 16 and 18-19, which include all the limitations of the respective independent claims, are submitted to patentably distinguish over Borg for at least the same reasons as claim 1.

New Claim 20

New claim 20, which includes all the limitations of claim 11, is submitted to patentably distinguish over Borg for at least the same reasons as claim 11.

Claim 20 includes further distinctions beyond those of claim 11, namely that "the video circuit includes a video sample and hold circuit and the video sample and hold circuit includes a single capacitor." That is, Borg discloses the use of a pair of capacitors per sample and hold circuit namely capacitors C1 and C2 for column amplifier 230 and capacitors C3 and C4 for column amplifier 240.

Claim 21 also includes further distinctions beyond those of claim 11, namely: "a further capacitor for holding a reset voltage, the further capacitor being coupled between the column input and the input of the amplifier when the capacitor of the video circuit is in the second mode and being coupled between the input and output of the further amplifier when the capacitor of the video circuit is in the first mode." Borg does not disclose or suggest such a coupling of any capacitor.

Accordingly, it is submitted that claims 20 and 21 patentably distinguishes over Borg for the additional limitations found therein.

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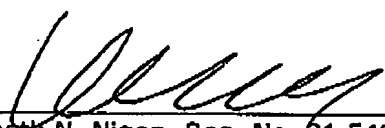
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Conclusion

In view of the claims amendments, new claim, and remarks, Applicants respectfully submits the application is condition for allowance, which action is respectfully requested.

Respectfully submitted,


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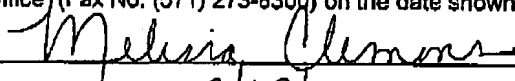
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